JUN 24 2004
PATENT & TRADEMARK OFFICE

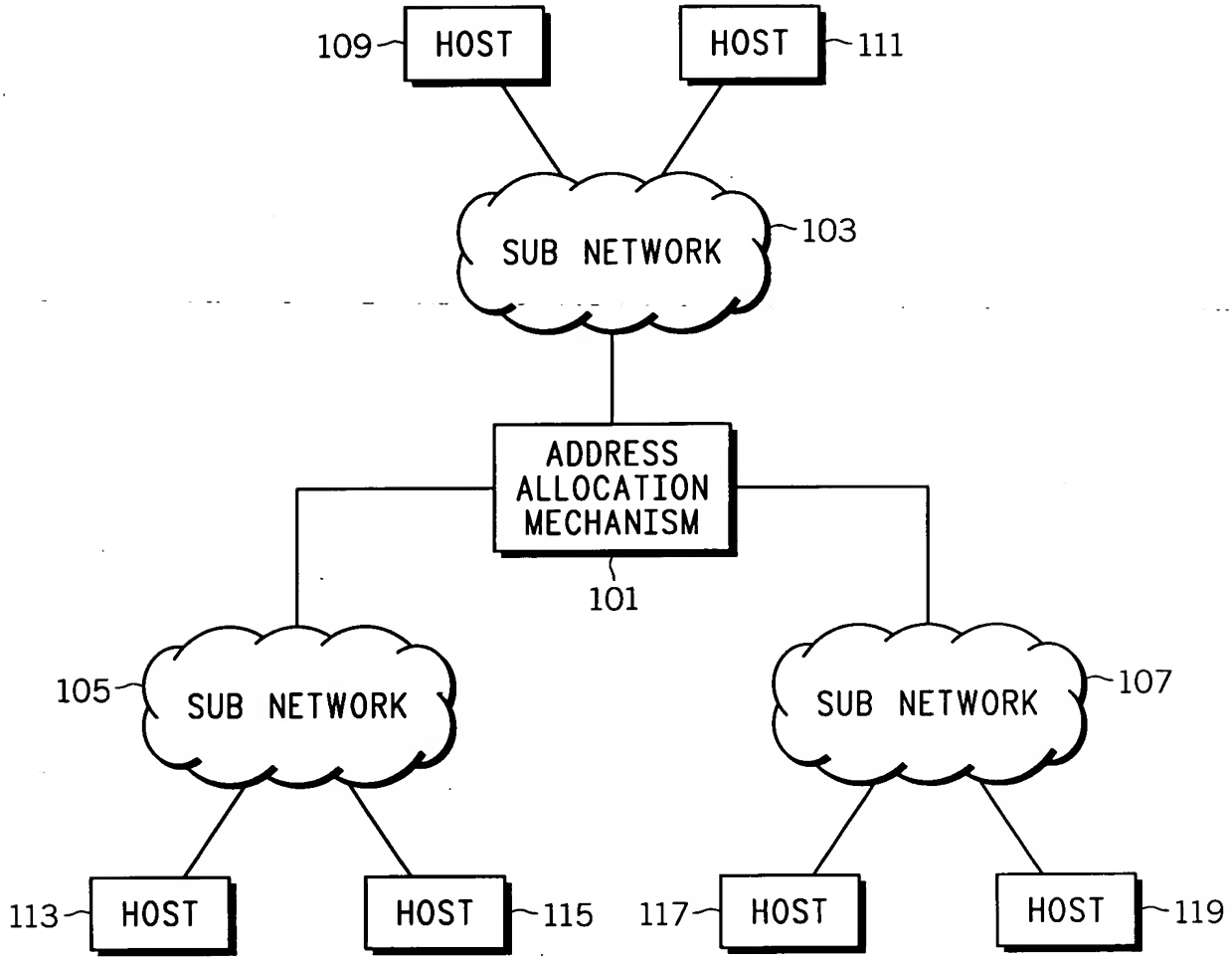
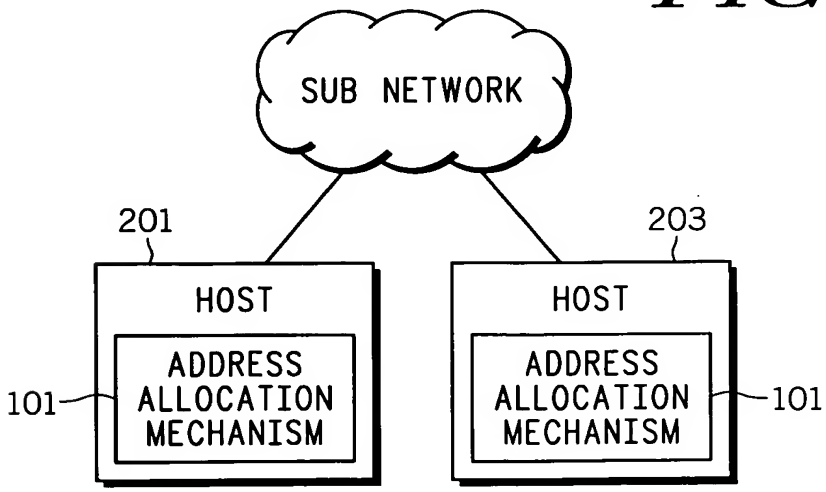


FIG. 1

FIG. 2



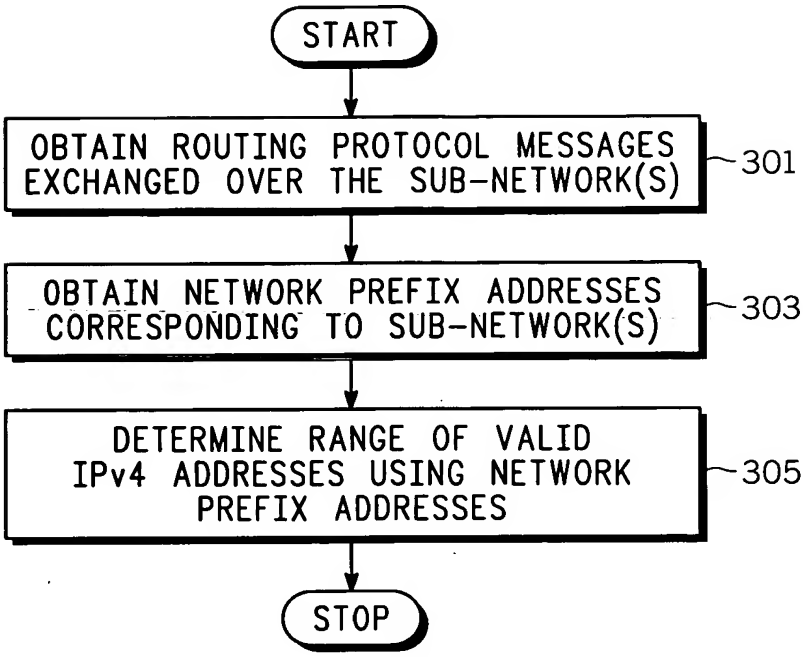


FIG. 3

FIG. 4

LS AGE	0	0	0	8
LINK STATE ID				
ADVERTISING ROUTER				
LS SEQUENCE NUMBER				
LS CHECKSUM			LENGTH	
RTR PRI	OPTIONS			
LINK LOCAL INTERFACE ADDRESS				
# PREFIXES				401
PREFIX LENGTH	PREFIX OPTIONS	(0)		
ADDRESS PREFIX				403
• • •				
PREFIX LENGTH	PREFIX OPTIONS	(0)		
ADDRESS PREFIX				405

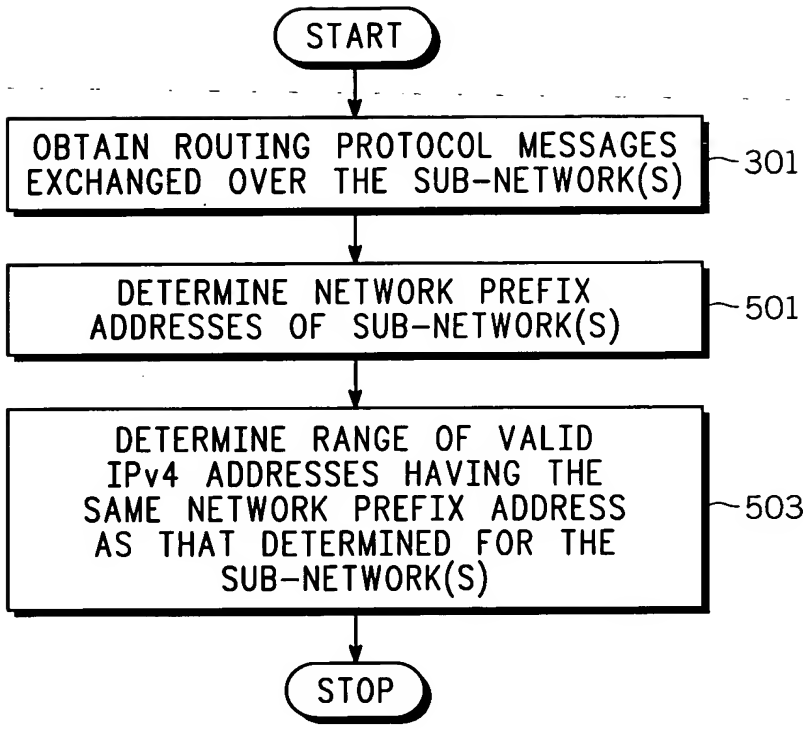

START
OBTAIN ROUTING PROTOCOL MESSAGES EXCHANGED OVER THE SUB-NETWORK(S)
301
DETERMINE NETWORK PREFIX ADDRESSES OF SUB-NETWORK(S)
501
DETERMINE RANGE OF VALID IPv4 ADDRESSES HAVING THE SAME NETWORK PREFIX ADDRESS AS THAT DETERMINED FOR THE SUB-NETWORK(S)
503
STOP

FIG. 5

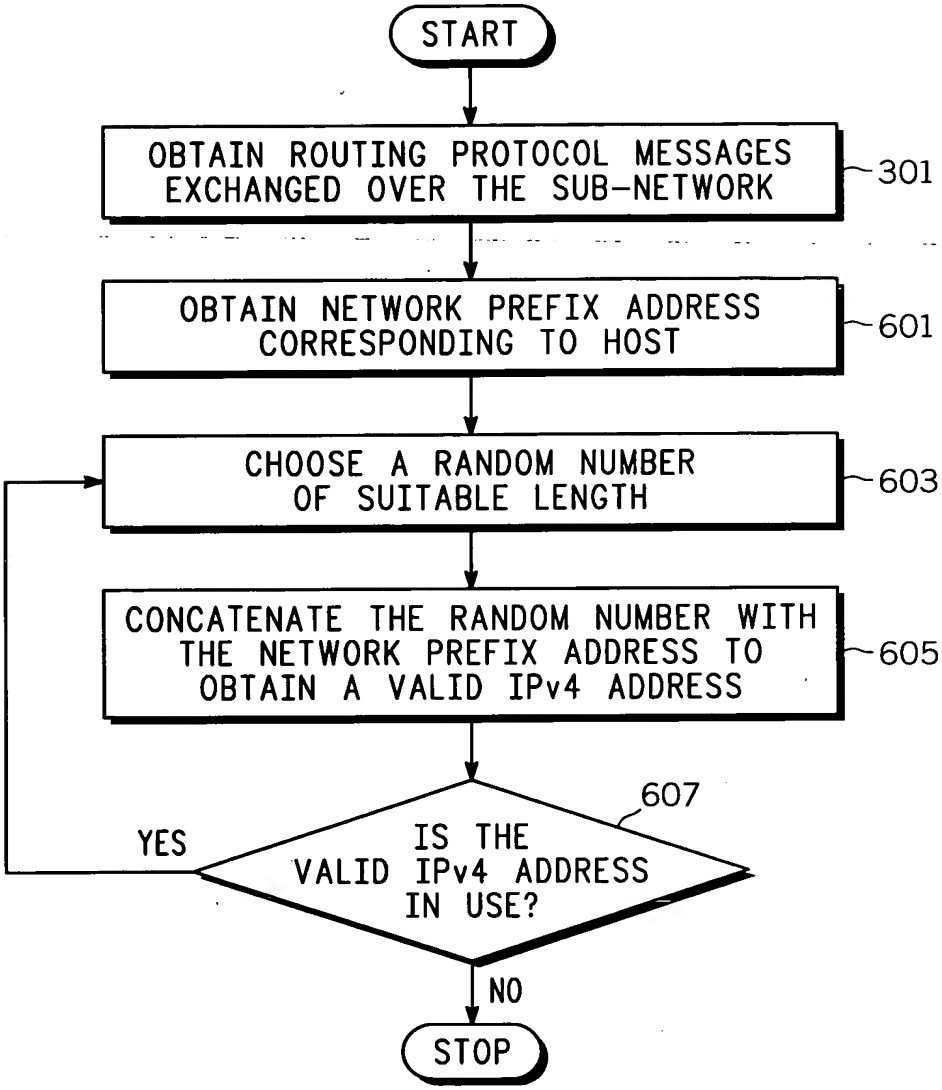

START
OBTAIN ROUTING PROTOCOL MESSAGES EXCHANGED OVER THE SUB-NETWORK
301
OBTAIN NETWORK PREFIX ADDRESS CORRESPONDING TO HOST
601
CHOOSE A RANDOM NUMBER OF SUITABLE LENGTH
603
CONCATENATE THE RANDOM NUMBER WITH THE NETWORK PREFIX ADDRESS TO OBTAIN A VALID IPv4 ADDRESS
605
607
IS THE VALID IPv4 ADDRESS IN USE?
YES
NO
STOP

FIG. 6

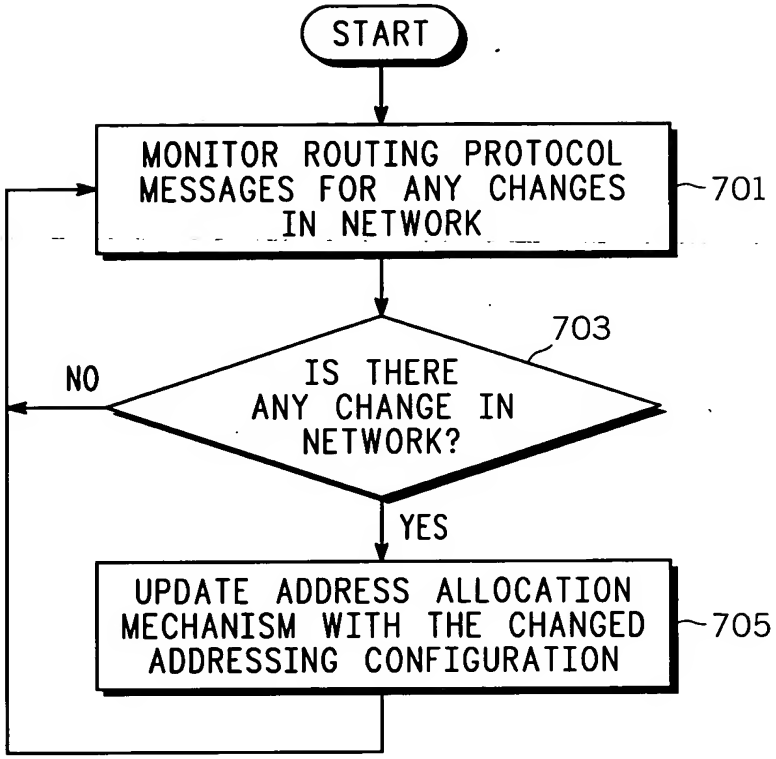
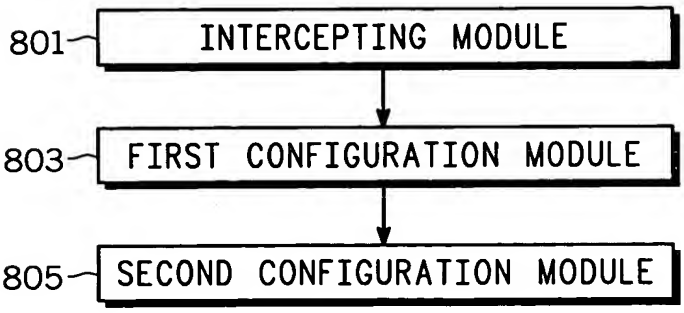

START
MONITOR ROUTING PROTOCOL MESSAGES FOR ANY CHANGES IN NETWORK
701
703
IS THERE ANY CHANGE IN NETWORK?
NO
YES
UPDATE ADDRESS ALLOCATION MECHANISM WITH THE CHANGED ADDRESSING CONFIGURATION
705

FIG. 7

FIG. 8


801
INTERCEPTING MODULE
803
FIRST CONFIGURATION MODULE
805
SECOND CONFIGURATION MODULE